Rethinking Philosophy

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Abstract: Can philosophy still be fruitful, and what kind of philosophy can be such? In particular, what kind of philosophy can be legitimized in the face of sciences? The aim of this paper is to answer these questions, listing the characteristics philosophy should have to be fruitful and legitimized in the face of sciences. Since the characteristics in question demand that philosophy search for new knowledge and new rules of discovery, a philosophy with such characteristics may be called the ‘heuristic view’. According to the heuristic view, philosophy is an inquiry into the world which is continuous with the sciences. It differs from them only because it deals with questions which are beyond the present sciences, and in order to deal with them must try unexplored routes. By so doing, when successful, it may even give birth to new sciences. In listing the characteristics that philosophy should have, the paper systematically compares them with classical analytic philosophy, because the latter has been the dominant philosophical tradition in the last century.

Keywords: Philosophy and knowledge · Philosophy and sciences · Armchair philosophy · Analytic philosophy · Heuristic view

1. The Need for a Rethinking of Philosophy

“If we ought to philosophize, we ought to philosophize, and if we ought not to philosophize, we ought to philosophize. In any case, therefore, we ought to philosophize. For if philosophy exists, we certainly ought to philosophize, because it exists. If instead it does not exist, in that case too we ought to inquire why it does not exist; but by inquiring we shall be philosophizing, because inquiry is the cause of philosophy” (Elias, In Porphyrii Isagogen et Aristotelis Categorias Commentaria, 3.19–23).

Are these claims, which are attributed to Aristotle’s Protrepticus, still valid today? The question is justified, because in the seventeenth century philosophy suffered a trauma from which it has not recovered yet, the birth of modern science. The latter has invaded many fields traditionally covered by philosophy. As a result, the role of philosophy has become problematic, and philosophy itself has come to need legitimation in the face of sciences.

In fact, a great deal of philosophy since the seventeenth century has been an attempt to provide such a legitimation. The proposed solutions, however, have been largely unconvincing. In particular, in the last century philosophers have made all possible efforts to prove that their subject is useless, so much so that Pinker states that “philosophy today
gets no respect. Many scientists use the term as a synonym for effete speculation” (Pinker 2002, 11).

Thus Feynman speaks of the “paralysis of thought that comes to philosophers, who sit opposite each other, one saying to the other, ‘You don’t know what you are talking about!’ The second one says, ‘What do you mean by know? What do you mean by talking? What do you mean by you?’, and so on.” (Feynman, Leighton and Sands 1963, 8–1). Weinberg says that he knows “of no one who has participated actively in the advance of physics in the postwar period whose research has been significantly helped by the work of philosophers,” and that philosophical doctrines “have generally lingered too long becoming of more harm than ever they were of use” (Weinberg 1993, 168–169). Dyson says that “compared with the giants of the past,” the present philosophers “are a sorry bunch of dwarfs,” which compels us to ask: “When and why did philosophy lose its bite? How did it become a toothless relic of past glories?” (Dyson 2012). Hawking says that traditionally the behaviour of the universe and the nature of reality “are questions for philosophy, but philosophy is dead,” so “scientists have become the bearers of the torch of discovery in our quest for knowledge” (Hawking and Mlodinow 2011, 5).

This does not mean that there are no scientists or mathematicians who are sympathetic to philosophy and use philosophical ideas in developing their work (see, for example, Pearl 2009). But philosophers should worry that some first-rate scientists feel the need to express their strong dissatisfaction with philosophy.

One must then ask: Can philosophy still be fruitful, and what kind of philosophy can be such? In particular, what kind of philosophy can be legitimized in the face of sciences? The aim of this paper is to answer these questions. It lists the characteristics that philosophy should have to be fruitful and legitimized in the face of sciences. The resulting view of philosophy may be called the ‘heuristic view’ because, according to it, philosophy should search for new knowledge and new rules of discovery.

In listing the characteristics of the heuristic view, the paper systematically compares them with classical analytic philosophy, because the latter has been the dominant philosophical tradition in the last century. Here the term ‘classical analytic philosophy’ denotes the philosophical tradition which started with Russell and Moore, and developed through the work of Wittgenstein and logical positivism, knowing a moment of particular fortune with the postwar Oxford school. In this connection, it must be mentioned that, according to Dummett, Frege “was the true father of analytical philosophy” (Dummett 2007, 27). But this is somewhat controversial. For example, Carl argues that “Frege is not an analytic philosopher” (Carl 1994, 24). Schwartz states that, although Frege, Gödel, Tarski, Turing, and Chomsky have “had a large influence on analytic philosophy,” he hesitates “to call any of these four ‘analytic philosophers’” (Schwartz 2012, 196).

In what follows, special reference will be made to Wittgenstein, because he is almost universally recognized as the single most significant figure in classical analytic philosophy.

The characteristics of the heuristic view that are listed below are not intended to suggest that philosophies that do not have those characteristics are bad philosophy, but only that such philosophies are unlikely to be legitimized in the face of sciences.

2. Philosophy and the World

According to the heuristic view, philosophy is an inquiry into the world which aims at acquiring knowledge about the world, including ourselves.
This contrasts with classical analytic philosophy. Thus Wittgenstein states that “philosophy gives no pictures of reality” (Wittgenstein 1979, 106). Dummett states that “philosophy is concerned with reality, but not to discover new facts about it” (Dummett 2010, 10).

But, if philosophy is not concerned to discover new facts about reality, it becomes a self-referential subject. Indeed, Moore states: “I do not think that the world or the sciences would ever have suggested to me any philosophical problem. What has suggested philosophical problems to me is things which other philosophers have said” (Moore 1952, 14).

Dummett admits: “The layman or non-professional expects philosophers to answer deep questions of great import for an understanding of the world” (Dummett 1991, 1). And “the layman is quite right: if philosophy does not aim at answering such questions, it is worth nothing. Yet he finds most writing by philosophers of the analytical school disconcertingly remote from these concerns,” and this complaint “is understandable” (ibid.). Somewhat inconsequently, however, Dummett concludes that the complaint is “unjustified,” because “philosophy can take us no further than enabling us to command a clear view of the concepts by means of which we think about the world, and, by so doing, to attain a firmer grasp of the way we represent the world in our thought” (ibid.). Philosophy “concerns our view of reality” only “by seeking to clarify the concepts in terms of which we conceive of it” (ibid., 11).

As the layman expects, philosophers should aim at answering deep questions of great import for an understanding of the world, including ourselves. Like science, philosophy is an extension of our most serious concerns by other means. Saying that philosophy concerns our view of reality only by seeking to clarify the concepts in terms of which we conceive of it, does not relieve philosophy from the obligation to give pictures of reality. For in order to enable us to command a clear view of the concepts in terms of which we conceive of reality, philosophy must put such concepts in relation with reality. But if philosophy gives no pictures of reality, how can it manage to do that?

3. Philosophy and Globality

According to the heuristic view, philosophy provides a global view. It is not limited to sectorial questions, so there cannot be a philosophy of mathematics alone, or physics alone, or biology alone, and so on.

This contrasts with classical analytic philosophy. Thus Carnap states that philosophers must confine themselves to sectorial questions, because “if we allot to the individual in philosophical work as in the special sciences only a partial task,” then “stone will be carefully added to stone and a safe building will be erected at which each following generation can continue to work” (Carnap 2003, xvii).

But, if philosophers confine themselves to sectorial questions, then they have no overall plan. This leads them to focus on smaller and smaller questions, thus confirming the motto: Some people know more and more about less and less, until they know everything about nothing, and these are the philosophers.

Classical analytic philosophy adopts the Socratic method of questions and answers, but preserves only its outward form, not the substance, that is, the serious search for answers to general questions. There is no evidence that a minute work on sectorial questions may lead to what is essential. On the contrary, philosophy must not be limited to sectorial questions but must give a global view. As Plato says, “anyone who can have a global view is a philosopher, and anyone who can’t isn’t” (Plato, Republic, VII 537 c 7).
Carnap’s argument for confining oneself to sectorial questions proposes an image of philosophy which assimilates it to what Kuhn calls normal science. The latter’s aim “is not major substantive novelties” (Kuhn 1996, 35). It accumulates details within a settled paradigm and theory, without questioning or challenging the underlying assumptions of the theory. Only within normal science the individual adds stone to stone working on a small piece of a broader project. Thus the image of philosophy that Carnap proposes is based on a partial view of science, the reduction of science to normal science.

4. Philosophy and Essential Problems

According to the heuristic view, philosophy must not deal with small inessential problems, but rather with great, essential problems in the sense of science.

This contrasts with classical analytic philosophy. Thus Wittgenstein states that in philosophy “there are no great essential problems in the sense of science” (Wittgenstein 2005, 301). Indeed, “philosophy is a tool which is useful only against the philosophers” (Wittgenstein 1932–33, 11).

But, if in philosophy there are no great essential problems in the sense of science, if philosophy is a tool which is useful only against the philosophers, why should one continue to practice it? How can one avoid concluding that philosophy is only a crossroads of many routes leading nowhere?

Russell himself, though being one of the fathers of classical analytic philosophy, complains that “the new philosophy seems to me to have abandoned, without necessity, that grave and important task which philosophy throughout the ages has hitherto pursued,” that is, “to understand the world” (Russell 1997, 170). It “cares only about language, and not about the world” (Russell 1960, 15). The “desire to understand the world is,” the new philosophers “think, an outdated folly” (Russell 1997, 162). In particular, Wittgenstein makes philosophy, “at best, a slight help to lexicographers, and at worst, an idle tea-table amusement” (ibid., 161). But, “if this is all that philosophy has to offer, I cannot think that it is a worthy subject of study” (ibid., 170).

5. Philosophy and Knowledge

According to the heuristic view, since philosophy is an inquiry into the world which aims at acquiring knowledge about it, questions about knowledge are central to philosophy.

This contrasts with classical analytic philosophy. Thus Searle states that questions about knowledge no longer “lie at the heart of the philosophical enterprise” (Searle 2008, 5). It “seems reasonable that in the seventeenth century” Descartes “saw his task as providing a secure foundation for knowledge,” because at that time “the very existence of knowledge was in question,” so “the possibility of certain, objective, universal knowledge seemed problematic” (ibid., 4). Therefore, Descartes “took epistemology as the central element of the entire philosophical enterprise” (ibid.). As a result, “we had three and a half centuries in which epistemology was at the centre of philosophy” (ibid., 5). But today, “because of the sheer growth of certain, objective, and universal knowledge, the possibility of knowledge is no longer a central question in philosophy,” thus epistemology no longer lies “at the heart of the philosophical enterprise” (ibid.).

But this is unjustified. Being an inquiry into the world, philosophy aims primarily at knowledge, thus epistemological questions necessarily
have a central place in philosophy. The purpose of epistemology is not to inquire into the possibility of certain, objective, universal knowledge, because there is no such knowledge. By Gödel’s second incompleteness theorem, even mathematical knowledge cannot be proved to be certain by absolutely reliable means. (For a discussion, see Cellucci 2013b, §1.6). The purpose of epistemology is rather to inquire into the means for acquiring knowledge, fallible knowledge and yet knowledge. This transfers epistemology from the context of justification to that of discovery, which includes the context of justification because, in the process of discovery, hypotheses are accepted only when they are shown to be plausible.

Dummett replaces epistemology with the theory of meaning as the centre of philosophy. He states that Descartes made epistemology “the foundation of philosophy because he had conceived the task of philosophy as being that of introducing rigour into science” (Dummett 1973, 676). But Descartes was wrong, “the fundamental part of philosophy which underlies all others” is “the theory of meaning” (ibid., 669). Epistemology deals with questions of justification, but “until we have first achieved a satisfactory analysis of the meanings of the relevant expressions, we cannot so much as raise questions of justification,” because “we remain unclear about what we are attempting to justify” (ibid., 667). It was Frege who made “the theory of meaning” the “foundation of all philosophy, and not epistemology, as Descartes misled us into believing” (ibid.). Thus Frege “effected a revolution in philosophy,” and hence we can “date a whole epoch in philosophy as beginning with the work of Frege” (ibid., 669).

But the theory of meaning cannot be the foundation of philosophy, because the main philosophical questions do not concern the use of language, they are questions about the world. Moreover, Frege did not replace epistemology with the theory of meaning as the centre of philosophy, because his main purpose was to give a secure foundation for mathematics, which was a question of justification within Descartes’ epistemological tradition (see Cellucci 1995). As Descartes conceived the task of philosophy as being that of introducing rigour into science, Frege conceived the task of philosophy as being that of introducing rigour in mathematics. Indeed, in order to achieve a secure foundation for mathematics, he asked that “the fundamental propositions of arithmetic should be proved, if in any way possible, with the utmost rigour” (Frege 1959, 4).

6. Philosophy and the Armchair

According to the heuristic view, philosophy is not an armchair subject, that is, a discipline which needs no input from experience and is the product of thought alone.

This contrasts with classical analytic philosophy. Thus Dummett states that philosophy “is a discipline that makes no observations, conducts no experiments, and needs no input from experience: an armchair subject, requiring only thought” (Dummett 2010, 4). Philosophy is like “another armchair discipline: mathematics. Mathematics likewise needs no input from experience: it is the product of thought alone” (ibid.).

But this is unjustified. Mathematics is not an armchair subject, because it essentially involves interactions with the world beyond the armchair. Indeed, several mathematical problems have an extra-mathematical origin, several mathematical concepts are formulated to deal with extra-mathematical questions, and several mathematical theories are developed to meet extra-mathematical needs and are
evaluated in terms of their capacity to meet those needs (see Cellucci 2013a). A fortiori, philosophy cannot be an armchair subject, because any inquiry into the world necessarily needs inputs from experience and does not require only thought. By thought alone we could at most reformulate what we already know in other terms.

7. Philosophy and the Sciences

According to the heuristic view, philosophy is continuous with the sciences, because the kind of knowledge at which it aims differs from scientific knowledge in no essential respect and is not restricted to any area. Thus the object of philosophy is not essentially different from those of the sciences, and philosophy is an activity not essentially different from the sciences. The only difference between philosophy and the sciences is that philosophy deals with questions which are beyond the present sciences. They are beyond the present sciences, not in the sense that they are open questions of some of the existing sciences, but rather in the sense that they are open questions of none of the existing sciences. The present sciences are about what we already know, philosophy is about what we still don’t know.

This contrasts with classical analytic philosophy. Thus Wittgenstein states that “natural science” is “something that has nothing to do with philosophy” (Wittgenstein 1974, 6.53). Similarly, Dummett states that “philosophy stands in complete contrast with sciences: its methods wholly diverge! from those of science, and its objective differs to an equal extent,” and “the results of philosophy differ fundamentally in character from those of the sciences” (Dummett 2010, 7).

But if philosophy stands in complete contrast with sciences, if its methods, objectives and results differ fundamentally in character from those of the sciences, how could it possibly contribute to our knowledge of reality?

That philosophy must be continuous with the sciences follows from the fact that, as Descartes states, philosophy aims at “a perfect knowledge of all things that man can know, both for the conduct of his life, and for the preservation of his health, and for the invention of all the arts” (Descartes 1996, IX–2, 2). For such reason Bacon says: “I have taken all knowledge to be my province” (Bacon 1857–1874, VIII, 109).

Dummett claims that saying that philosophy is continuous with the sciences is a form of scientism, where “scientism is the disposition to regard the natural sciences as the only true channel of knowledge” (Dummett 2010, 35). According to him, saying that philosophy is continuous with the sciences implies that “the idea that philosophy has a subject matter or a method of its own must be discarded: if it is to contribute to knowledge at all, it must be continuous with the natural sciences,” thus the task of philosophy reduces “to that of adding ornamentation to the theories of the scientists” (ibid.).

But saying that philosophy is continuous with the sciences does not amount to considering the present sciences as the only true channel of knowledge, or to reducing the task of philosophy to that of adding ornamentation to the theories of the scientists. There are areas of experience which the present sciences are incapable of dealing with. Dealing with them requires new ideas, not devised by any of the present sciences, and it is the task of philosophy to devise them. In this sense, the objectives of philosophy are not essentially different from those of the sciences, and philosophy is an activity that is not essentially different from the sciences.

8. Philosophy and the Results of the Sciences
According to the heuristic view, philosophy makes use of the results of the sciences, and this is essential to its progress. For philosophy primarily aims at knowledge, and to acquire it must start from the available knowledge.

This contrasts with classical analytic philosophy. Thus Wittgenstein states that “the name ‘philosophy’ might also be given to what is possible before all new discoveries” (Wittgenstein 2009, § 126). Therefore, philosophy is independent of any scientific discovery, in particular “no mathematical discovery can advance it” (ibid, § 124).

But if, in dealing with philosophical problems, no use is made of the results of the sciences, philosophy ends up with repeating old idioms, neglecting that they are often based on obsolete views of the world. This is not only acknowledged but even theorized by Wittgenstein, who states that “no new words have to be used in philosophy – the old, ordinary words of language suffice” (Wittgenstein 2005, 309).

Contrary to Wittgenstein’s claims, in order to deal with new philosophical problems, philosophy must be able to use whatever is known, starting from the results of the sciences, introducing new idioms adequate to the questions dealt with. Old idioms are based on common sense, which is a stratification of beliefs based on obsolete scientific theories, or simply on prejudices.

9. Philosophy and Method

According to the heuristic view, the method of philosophy is the same as that of the sciences, that is, the analytic method (see below). Indeed, since philosophy is an activity which is not essentially different from the sciences, its method too cannot be essentially different.

This contrasts with classical analytic philosophy. Thus Wittgenstein states that philosophers are not aimed “at the same target as the scientists,” so the philosophers’ “way of thinking is different from theirs” (Wittgenstein 1980, 7). Therefore, the method of philosophy cannot be the same as the method of the sciences. Dummett states that “the goal of philosophy is the analysis of the structure of thought,” and “the only proper method for analyzing thought consists in the analysis of language” (Dummett 1978, 458). Claiming that the method of philosophy consists in the analysis of language is justified, because “there can be no account of what thought is, independently of its means of expression” (Dummett 1991, 3). Moreover, “doctrines concerning meaning can be fairly readily transposed into doctrines concerning thought, and vice versa. An analysis of the logical structure of sentences can be converted into a parallel analysis of the structure of thoughts” (ibid.). Thus there is an isomorphism between language and thought.

But the method of philosophy cannot be the analysis of language, because philosophy is an inquiry into the world, and the analysis of language is inadequate to that purpose. For questions about the world are not questions of words but questions of things. As Kant states, “in matters over which one has quarreled over a long period of time, especially in philosophy, there has never been at the basis a quarrel of words but always a true quarrel over things” (Kant 2007, 179).

Moreover, saying that there is an isomorphism between language and thought contrasts with the results of the cognitive sciences, which provide evidence for the possibility of thought without language. For example, preverbal babies are able to do some simple arithmetic (see Wynn 1992). They show surprise when faced with physically implausible scenes (see Spelke 1994). Profoundly deaf children invent
their own gestures to communicate their thoughts and needs (see Goldin-Meadow and Mylander 1983).

Furthermore, several scientists and mathematicians have claimed that their most creative work does not involve language. For example, Einstein states that “the words or the language, as they are written or spoken, do not seem to play any role in my mechanism of thought. The psychical entities which seem to serve as elements in thought” are, “in my case, of visual and some of muscular type” (Einstein 1954, 142–143). Hadamard states: “Words are totally absent from my mind when I really think,” and “do not reappear in my consciousness before I have accomplished or given up the research” (Hadamard 1954, 75).

Since philosophy is an inquiry into the world, its method must be the same as that of the sciences, that is, the analytic method, a method first used by the mathematician Hippocrates of Chios and the physician Hippocrates of Cos. According to the analytic method, to solve a problem, one looks for some hypothesis that is a sufficient condition for solving it. The hypothesis is obtained from the problem, and possibly other data already available, by some non-deductive rule, and must be plausible, that is, compatible with the existing data. But the hypothesis is in its turn a problem that must be solved, and is solved in the same way. That is, one looks for another hypothesis that is a sufficient condition for solving the problem posed by the previous hypothesis, it is obtained from the latter, and possibly other data already available, by some non-deductive rule, and must be plausible. And so on, ad infinitum. (For more on the analytic method, see Cellucci 2013b, Chapter 4).

That the method of philosophy is the analytic method is already claimed by Plato, who states that, to solve a problem, “on each occasion I assume the hypothesis which I judge to be the strongest, and I lay down as true whatever seems to me to agree with it”, while “I put down as not true whatever does not seem to me to agree with it” (Plato, Phaedo, 100 a 3–7). But, once you had assumed a hypothesis, you wouldn’t go on until “you had investigated its consequences, to see whether they agreed or disagreed with one another” (ibid., 101 d 4–5). Moreover, you would have to give an account of the hypothesis itself. Now, “to give an account of the hypothesis, you would give it in the same way, assuming another hypothesis, whichever among higher hypotheses seemed best, until you came to something” provisionally “sufficient” (ibid., 101 d 5–e 1). And so on, ad infinitum, thus solving a problem is “an endless task” (Plato, Parmenides, 136 c 7).

That the method of philosophy can be the analytic method is also contemplated by Kant, who states: “The method we are now following is to be analytic” (Kant 2002, 72). This means that “one proceeds from that which is sought as if it were given, and ascends to the conditions under which alone it is possible,” so this method “might better be called the ‘regressive’ method” (ibid., 73, footnote).

10. Philosophy and the Search for New Knowledge

According to the heuristic view, philosophy searches for new knowledge. Since it is an activity not essentially different from the sciences, searching for new knowledge is part of the deepest nature of philosophy.

This contrasts with classical analytic philosophy. Thus Wittgenstein states that philosophy “arises neither from an interest in the facts of nature, nor from a need to grasp causal connections,” because it is “essential to our investigation that we do not seek to learn anything new by it” but only “to understand something that is already in plain view” (Wittgenstein 2009, § 89). In philosophy “it is not that a new building has to be erected, or that a new bridge has to be built, but that the
geography, as it now is, has to be judged” (Wittgenstein 1983, V, § 52). Philosophy has no impact on the growth of knowledge but “leaves everything as it is” (Wittgenstein 2009, § 124). It “just puts everything before us, and neither explains nor deduces anything” (ibid., § 126). It “only states what everyone admits” (ibid., § 599). Quine states that “the only point of view” the philosopher “can offer” is “the point of view of our own science” (Quine 1981, 181). He “begins his reasoning within the inherited world theory,” that is, the present sciences, and “tries to improve, clarify, and understand the system from within” (ibid., 72). Dummett states that “philosophy does not advance knowledge: it clarifies what we already know” (Dummett 2010, 21). It “does not seek to observe more, but to clarify our vision of what we see” (ibid., 10).

Maddy states that “the best confirmation of success” of a philosophical analysis of mathematics “would be for the mathematician to shrug and say, ‘Of course, everybody knows that’. I think there is a non-trivial link between this fact and Wittgenstein’s remark that ‘Philosophy only states what everyone admits’” (Maddy 1998, 137).

But a philosophy thus meant has little justification to exist. For such reason Dummett says that today “it is by no means obvious that universities, and thus ultimately the state, should support philosophy” but for the historical precedent that “the history of Western universities goes back 900 years” and “philosophy has always been one of the subjects taught and studied in them” (Dummett 2010, 2). When the first Western universities came into being, philosophy “was not sharply differentiated from what we call ‘natural science’” (ibid.). It was then easy to find a justification for philosophy. But in the twentieth century “the distinction between philosophy and the natural sciences came to be generally admitted” (ibid., 3). Then finding a justification for philosophy has become difficult. Indeed, “if universities had been an invention of the second half of the twentieth century, would anyone have thought to include philosophy among the subjects that they taught and studied? It seems very doubtful” (ibid., 2). It “would be easy to conclude that this is an anachronism” (ibid.).

This is the conclusion to which the assumption that philosophy does not search for new knowledge leads. While, in the philosophical tradition, philosophy was inspired by the hope that it would contribute to the advance of knowledge, classical analytic philosophy conceives of philosophy in such a way that it becomes incapable of making any contribution to our knowledge of the world. Then, as Dummett says, it would be easy to conclude that it is an anachronism.

11. Philosophy and the Search for New Rules of Discovery

According to the heuristic view, philosophy searches for new rules of discovery. Since it searches for new knowledge and nothing guarantees that new knowledge can be obtained by the existing rules, it is natural for it to search for new rules of discovery.

This contrasts with classical analytic philosophy. Thus Hempel states that philosophy cannot search for new rules of discovery, because new hypotheses cannot be obtained by “any process of systematic inference” (Hempel 1966, 15). One may arrive at them only through “imaginative, insightful guessing” (ibid., 17). Thus through intuition. To support this view, Hempel mentions the case of Kekulé who one evening, while sitting by a fire, sank into half-sleep and had a dream. He saw atoms fluttering before his eyes, long chains often combined in a denser fashion, all in motion, twisting and turning like snakes, until one of the snakes seized its own tail. This suggested to Kekulé the hypothesis that benzene forms a closed ring of six carbon atoms. According to Hempel,
Kekulé’s case shows that, to solve a problem, scientists essentially depend on intuition, thanks to which only they may arrive at “the discovery of important, fruitful theories in empirical science” (ibid.).

But Kekulé’s case does not show that. Kekulé himself does not say he had an intuition but only a dream. Moreover, at Kekulé’s time it was well known that the behavior of a molecule depended on its structure, and the structures already tried for benzene were inadequate. Therefore, Kekulé was well aware of the need to find a new structure, and had already considered various possibilities on that regard. Seeing that a snake biting its tail formed a stable structure suggested to him, by an analogical inference, that a structure for benzene could be of that kind. Furthermore, Kekulé put forward the hypothesis that the structure of benzene is a closed ring only after comparing the hypothesis with the existing data. Therefore, he formed his hypothesis through a rational process.

There is also the question whether Kekulé’s report of the event was reliable. It has been maintained that Kekulé made up the whole episode. This has been subject of some controversy (see Rocke 2011, Chapter 10).

12. Philosophy and the Birth of New Sciences

According to the heuristic view, since philosophy deals with questions which are beyond the present sciences, it must try unexplored routes in order to deal with them. By so doing, when successful, it may even give birth to new sciences. Its greatest value consists in this.

This contrasts with classical analytic philosophy. Thus Dummett states that “no practicing philosopher would explain the value of the subject merely as a matrix out of which new disciplines could develop” (Dummett 2010, 4). Philosophy is “what is left when the disciplines to which it gave birth have left the parental home” (ibid.). Therefore, “it was not until the nineteenth century that it made sense to ask for an example of a philosophical problem, as opposed to a problem of some other kind.” (ibid., 8).

But trying unexplored routes, possibly giving birth to new sciences, is part of the deepest nature of philosophy. For example, in the seventeenth century philosophy gave birth to modern physics, which originated from a philosophical revolution: Galileo’s renunciation of Aristotle’s aim “to penetrate the true and intrinsic essence of natural substances,” contenting ourselves “with coming to know some properties of them” mathematical in character, “such as location, motion, shape, size” (Galilei 1968, V, 187–188). That modern physics originated from such philosophical revolution is acknowledged by Newton, who states that “the moderns, laying aside substantial forms and occult qualities, have endeavoured to subject the phenomena of nature to mathematical laws” (Newton 1972, I, 15). As a more recent example, in the twentieth century philosophy gave birth to computer science, which originated from Turing’s attempt to analyze the computational behavior of human beings; to cognitive science, which originated from the interaction between traditional philosophical speculation on mind and Turing’s analysis; and to Bayesian statistics, which originated from the philosophical efforts to clarify what a rational belief is.

There is no reason to think that philosophy will not give birth to new sciences also in the future. The realm of what we still don’t know, even about basic things, is vast. In this connection it is worth recalling Seneca’s prediction: “Veniet tempus quo posteri nostri tam aperta nos nescisse mirentur [A time will come when our posterity will marvel that we were ignorant of such obvious things]” (Seneca, Naturales Quaestiones 7.25).

For example, the theories of evolution take no account of the fact that knowledge may greatly affect evolution, so such theories need to be
integrated with a theory of knowledge, which would involve going beyond biology or any other present science. As another example, dealing with the extended mind thesis (see Menary 2010) would involve going beyond psychology or any other present science.

Of course, trying unexplored routes, philosophy moves on a magmatic ground, therefore it can offer no theories but only viewpoints. The proper place for theories are the new sciences to which philosophy may possibly give birth. But this does not make philosophy less continuous with the sciences. Acquiring knowledge is a profoundly unitary enterprise.

In fact, in addition to giving birth to new sciences, sometimes philosophy can also help with the development of established sciences. As Heller states, “the problems and concepts transformed by the migration from philosophy to the sciences often come back for further philosophical deliberation, in that way thickening the connections between the two realms of knowledge” (Heller 2011, vi). In particular, the intervention of philosophy is useful, and even necessary, when scientists start basing themselves on some objectionable philosophical assumptions.

13. Philosophy and the History of Philosophy

According to the heuristic view, philosophy makes use of the experience of the philosophers of the past. Without some use of such experience, philosophers would keep reinventing the wheel, or trying routes which have already turned out to be unfruitful. Therefore, the history of philosophy is relevant to philosophers.

This contrasts with classical analytic philosophy. Thus Wittgenstein states: “What has history to do with me? Mine is the first and only world! I want to report how I found the world. What others in the world have told me about the world is a very small and incidental part of my experience of the world” (Wittgenstein 1979, 82, 2.9.16). Philosophers must behave like a king “brought up in the belief that the world began with him” (Wittgenstein 1969, 92).

In fact, in formulating problems and dealing with them, some classical analytic philosophers behave like that king, not only with respect to the philosophical tradition, but also with respect to their own history. They tend to consider only the problems and the solutions their generation proposes, ignoring those of the previous generations. By so doing, they think to behave like those scientists who, while knowing only the most recent literature in their field, give contributions to their discipline

But it is not so. For those scientists deal with questions posed by the world, though very limited ones, and, being very limited, in some cases knowledge of the most recent literature alone may be enough to deal with them. Conversely, philosophers who only know the most recent literature do not deal with question posed by the world, but only with puzzles posed by their colleagues, which are generally irrelevant to an inquiry into the world.

Of course, philosophy and the history of philosophy address different questions. In this respect it is worth repeating Kant’s complaint that “there are scholars for whom the history of philosophy (ancient as well as modern) is itself their philosophy” (Kant 2002, 53). They are wrong because philosophy is about present problems, while history of philosophy is about what other philosophers thought. Nevertheless, knowing what they thought may be helpful to avoid reinventing the wheel or hunting down trails that are known to be dead ends.

14. Philosophy and Intuition
According to the heuristic view, philosophy makes no use of intuition, because the method of philosophy is the same as that of the sciences, and intuition plays no role in the method of the sciences.

This contrasts with classical analytic philosophy. Thus Wittgenstein states: “God grant the philosopher insight into what lies in front of everyone’s eyes” (Wittgenstein 1980, 72). Also knowing logical relations requires intuition, because “I can’t come to this insight through a logical inference, I must see it” (Wittgenstein 1975, 336). Philosophy depends on intuition like mathematics, in which “no investigation of concepts, only insight into the number-calculus can tell us that \(3 + 2 = 5\)” (Wittgenstein 1978, 347). Even “in order to follow the rule ‘Add 1’ correctly a new insight, intuition, is needed at every step” (Wittgenstein 1972, 141).

But, being subjective and arbitrary, intuition is unreliable. Bealer states that “denying that intuitions are evidence leads to epistemic self-defeat; it is impossible to have a coherent epistemology without admitting intuitions as evidence” (Bealer 1996, 32, footnote 26). But this is unjustified because it is possible to have a coherent view of philosophy and the sciences if, as said earlier, one admits that the method of philosophy is the same as that of the sciences, that is, the analytic method (already mentioned in section 9), in which intuition plays no role.

Admittedly, several mathematicians say that intuition plays an essential role in solving a problem. But, as Peirce says, “we have no power of intuition” (Peirce 1931–1958, 5.265). What mathematicians call ‘intuition’ is really some non-deductive inference unconsciously formed. Indeed, why do only mathematicians have those intuitions? Because they have sufficient background knowledge and have been thinking and rethinking intensely about the problem. This provides them with the data on the basis of which they make an expert guess through some non-deductive inference unconsciously formed. (For more on this, see Cellucci 2013b, Chapter 13).

**15. Philosophy and Emotion**

According to the heuristic view, philosophy is concerned with emotion not only because emotion is important to the quality and meaning of our existence, but also because emotion is complementary to reason. Indeed, it can help to choose appropriate means to given ends.

This contrasts with classical analytic philosophy. Thus Russell states that, although “the emotions are what makes life interesting, and what makes us feel it important,” when “we are trying to understand the world, they appear rather as a hindrance. They generate irrational opinions” which “cause us to view the universe in the mirror of our moods” (Russell 1995, 175–176).

But this overlooks that only organisms which perceive a favorable occasion as a positive emotion, and danger as a negative one, can survive. This even includes simple organisms because, as Damasio points out, “there is abundant evidence of ‘emotional’ reactions” even “in simple organisms,” including “a lone paramecium” (Damasio 2003, 40). Thus emotions help to choose appropriate means to the end of survival.

They also help to choose appropriate means to the end of knowledge acquisition, because there can be no knowledge without emotion. If emotions are missing, one will lack the drive to seek knowledge, or will not focus attention on the means to achieve it. Emotions may serve as a guide in choosing which problems to consider and which to disregard. Only if one feels strongly involved in a problem one may have the drive to deal with it and face the hard work that finding a solution may involve. (For more on this, see Cellucci 2013b, Chapter 15).
Even Carnap admits that “the practical handling of philosophical problems and the discovery of their solutions does not have to be purely intellectual, but will always contain emotional elements” (Carnap 2003, xvii). Not only in philosophy, but also in physics and mathematics, “the basic orientation and the direction of interests are not the result of deliberation, but are determined by emotions” (ibid.).

16. Philosophy and the Solvability of Problems

According to the heuristic view, like science, philosophy cannot demand and expect conclusive solutions to the questions belonging within it. Solutions to philosophical problems are always temporary and are bound to be replaced sooner or later by others. But new solutions can yield advances in knowledge. There is progress everywhere, even in philosophy.

This contrasts with classical analytic philosophy. Thus Wittgenstein states that “philosophical problems must be solvable really completely, in contrast to all others” (Wittgenstein 2005, 310). But their solution is no real progress, because in philosophy we are simply destroying “houses of cards, and we are clearing up the ground of language on which they stood” (Wittgenstein 2009, § 118). People complain that “philosophy really doesn’t make any progress, that the same philosophical problems that occupied the Greeks keep occupying us. But those who say that don’t understand” that this is so because “our language has remained the same and keeps seducing us into asking the same questions” (Wittgenstein 2005, 312). As long as language will remain the same, “humans will continue to bump up against the same mysterious difficulties, and stare at something that no explanation seems able to remove” (ibid.).

But a conclusive solution to philosophical problems is impossible. Philosophical problems, being problems about the world, are similar to scientific problems, and the latter cannot be solved conclusively. Each solution is based on hypotheses, and hence is always temporary and bound to be replaced with another one as new data arise. Wittgenstein himself acknowledges that “in this work more than any other it is rewarding to keep on looking at questions, which one considered solved, from another quarter, as if they were unsolved” (Wittgenstein 1979, 30, 13.11.14). Therefore, it is arbitrary to insist that philosophical treatments of problems are valuable only if they provide conclusive solutions.

Dennett states that, confronted with the alternative of (A) solving a major philosophical problem “so conclusively that there is nothing left to say,” or (B) writing “a book of such tantalizing perplexity and controversy that it stays on the required reading list for centuries to come,” some philosophers “admit that they would have to go for option (B)” (Dennett 2013, 429). Conversely, scientists “tend to opt for (A) without any hesitation” and “shake their heads in wonder (or disgust?) when they learn that this is a hard choice for many philosophers” (ibid.). But for once, philosophers are right and scientists are wrong, because not only no major philosophical problem, but also no major scientific problem can be solved so conclusively that there is nothing left to say.

As to language, even allowing that it has remained essentially the same since the Greeks, and hence leads us to ask the same questions again and again, the world changes all the time, there are no two instants in which it is exactly the same. For that reason it leads us to ask ever new questions. Therefore, it is arbitrary to restrict philosophy to the method of the analysis of language.

17. Philosophy and Professionalism
According to the heuristic view, philosophy cannot be a professional activity, because it has no special field to investigate or special techniques of its own to use.

This contrasts with classical analytic philosophy. Thus Carnap states that, “while the attitude of the traditional philosopher is more like that of a poet,” the philosophers of the new kind “have taken the strict and responsible orientation of the scientific investigator as their guideline for philosophical work” (Carnap 2003, xvi). In the philosophy of the new kind “the individual no longer undertakes to erect in one bold stroke an entire system of philosophy. Rather, each works at his special place within the one unified science” (ibid.). Thus “each collaborator contributes only what he can endorse and justify before the whole body of his co-workers” (ibid., xvii).

This is based on the assumption that philosophy must be confined to sectorial questions. Such assumption brought several philosophers to believe that in philosophy a Taylorian division of work is possible, which led to an increasing technicalization of philosophy. But, as Rescher points out, “the increasing technicalization of philosophy has been achieved at the expense of its wider accessibility – and indeed even to its accessibility to members of the profession” (Rescher 2001, 38). Philosophy “has become increasingly technical in character,” its investigations make increasingly extensive use of the formal machinery of semantics, modal logic, computation theory, learning theory, etc. Ever heavier theoretical armaments are brought to bear on ever smaller problem targets” (ibid.). This has produced a new kind of scholasticism, characterized by an argumentative style made of dreary distinctions concerning minute questions, incapable of making significant contributions to an inquiry into the world.

Austin even states that, to become a professional philosopher, “first we may use the dictionary – quite a concise one will do, but the use must be thorough” (Austin 1970, 186). There are two ways of using it, “one is to read the book through, listing all the words that seem relevant,” the other “is to start with a widish selection of obviously relevant terms, and to consult the dictionary under each: it will be found that, in the explanations of the various meanings of each, a surprising number of other terms occur” (ibid., 186–187). We then look up each of these, and “when we have continued for a little, it will generally be found that the family circle begins to close, until ultimately it is complete” (ibid., 187). Indeed, “definition, I would add, explanatory definition, should stand high among our aims” (ibid., 189).

But thus one does not get at the nature of things, only at the opinion of the authors of the dictionary. Admittedly, the Socratic endeavor was the pursuit of definition, because Socrates thought that, until one knows the essence of a thing, one cannot answer any other questions about it, and that a definition states what a thing is, so its essence. But, stating the essence of things, Socratic definitions are of things, not of words. Socrates did not want to know what the word ‘knowledge’ means, but what the nature of knowledge itself is. On the contrary, several classical analytic philosophers are not concerned with determining the essence of things, but only with “examining what we should say when, and so why and what we should mean by it” (Austin 1970, 181).

In fact, a professional philosophy is impossible. A philosopher cannot be a professional in the same sense as a mathematician, or a physicist, or a biologist, because philosophy has no special field of its own. As Descartes says, philosophy aims at the knowledge of all things that man can know, both for the conduct of his life, and for the preservation of his health, and for the invention of all the arts. However, as sciences claim special fields, philosophy’s field of inquiry changes. It
remains the unexplored ground, but what ground is unexplored changes with time.

On the other hand, a philosopher cannot be a professional in the same sense as a doctor, or a lawyer, or an engineer, because philosophy has no special techniques of its own. Although the method of philosophy is the same as that of the sciences, that is, the analytic method, the latter is only a general framework and its application requires experience specific to the field, whereas a philosopher moves on an unexplored ground, on which there is still very limited experience.

Therefore a philosopher is, and always will be, a great amateur. But precisely because a philosopher moves on an unexplored ground, on which there is still very limited experience, philosophy is always exposed to the risk of failure but is also capable of surprising developments. Just like those thanks to which, trying unexplored routes, through hazardous though sometimes fortunate moves, philosophy has given birth to new sciences.

18. The Heuristic View and Russell’s View

The heuristic view should not be confused with Russell’s view. Admittedly, Russell states that philosophy “aims primarily at knowledge” (Russell 1997, 154). A knowledge which “does not differ essentially from scientific knowledge,” since “there is no special source of wisdom which is open to philosophy but not to science, and the results obtained by philosophy are not radically different from those obtained from science” (ibid., 149). Indeed, “science is what we know, and philosophy is what we don’t know,” but “philosophical speculation as to what we do not yet know has shown itself a valuable preliminary to exact scientific knowledge” (Russell 1950, 24). According to Russell, however, the knowledge philosophy aims at is the kind of knowledge “which results from a critical examination of the grounds of our convictions, prejudices, and beliefs” (Russell 1997, 154). Philosophy “examines critically the principles employed in science” (ibid., 149). It does so “to see whether they are mutually consistent and whether the inferences employed are such as seem valid to a careful scrutiny” (Russell 1995, 239).

This view seems unrealistic, because scientists don’t have to wait for philosophers to examine critically the principles employed in their sciences to see whether they are mutually consistent, or whether the inferences employed are valid. This is an integral part of their work, and they are much more competent to the task than philosophers, who do not have the necessary qualification – even if this does not exclude that sometimes philosophy can help with the development of established sciences. Moreover, a philosophy in accordance with Russell’s view could not be expected to give birth to new sciences.

Conversely, a philosophy in accordance with the heuristic view would permit to give an affirmative answer to the question raised in the first section – whether philosophy can still be fruitful, and what kind of philosophy can be such. A philosophy with such characteristics might be fruitful because it searches for new knowledge, it searches for it trying unexplored routes and may even give birth to new sciences.

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References


